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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,485	08/31/2000	Raj P. Singh	00-2-025	2893

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/652,485

Applicant(s)

SINGH ET AL.

Examiner

George P Wyszomierski

Art Unit

1742

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (U.S. Patent 6,054,110), in view of either Ohta et al. (U.S. Patent 5,744,259) or Nakamura et al. (U.S. Patent 6,103,213). This is a new ground of rejection.

Initially, the examiner notes that the present Applicants make the claimed heterogenite (also known as HCoO_2 or CoOOH) powder by heating at 110 degrees C. Yamada et al. discloses heterogenite powder materials, but does not specify the surface area thereof. The prior art forms the heterogenite material by heating to a temperature as indicated on page 3 of the present specification; see Yamada column 3, line 59. Additionally, example 1 of Yamada begins with a cobalt compound having a H/O ratio of 1.15/ 2.07 prior to heating. The further examples of Yamada indicate that with increasing heating temperatures, the amounts of hydrogen and oxygen in the compound decrease, as indicated below.

<u>Yamada example</u>	<u>Heating temperature ($^{\circ}\text{C}$)</u>	<u>H/ O ratio (after heating)</u>
Prior to heating	None	1.15/ 2.07
1	90-100	Not stated
3	150	0.68/ 1.79
5	200	0.51/ 1.67
2	300	0.19/ 1.46
4	500	0.02/ 1.34

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From the above table, it is logical to conclude that example 1 of Yamada would possess a H/O ratio somewhere near the 1/2 ratio present in a perfect heterogenite powder.

The Ohta and Nakamura references disclose that it is known in the art that both cobalt hydroxide (Ohta) and cobalt powder made from heterogenite (Nakamura) are known to exist having a surface area as presently claimed. See Table 1 of Ohta or Table 2 of Nakamura. The examiner further notes that Nakamura Table 2 indicates that surface area decreases with increasing heating temperature. Given that the Yamada examples suggest to one how to produce heterogenite, and that the secondary references indicate that substances chemically similar to heterogenite are conventionally produced in the art in a surface area range as presently claimed, the examiner's position is that the combination of the Yamada disclosure together with that of Ohta or Nakamura would have taught the presently claimed invention to one of ordinary skill in the art.

3. The request for reconsideration filed January 22, 2003 included arguments that the claimed invention would be patentable over Yamada alone (or over a previously cited Japanese document). The examiner believes that the newly cited Ohta or Nakamura references supply any deficiency which may be present in the Yamada disclosure.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (703) 308-2531. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for this Group is (703) 872-9310 for all correspondence except for After Final amendments in which case the Fax number is (703) 872-9311. The Right fax number for this examiner is (703) 872-9039. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

GPW
February 26, 2003


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER